

CLAIMS

1. A composition comprising a mixture of at least two different dendrimers A and B which possess the same core and the same repeating unit or
5 units in the dendrons wherein either the generation of at least one of said dendrons in one of said dendrimers (A) is different from the generation of at least one of the dendrons in the other of said dendrimers (B), or the number of dendrons in one of said dendrimers, is different from the number of dendrons in the other of said dendrimers, or both the number of dendrons and the generation of at least one of the
10 dendrons in one said dendrimer (A) is different from the number and generation of dendrons in the other said dendrimer (B).
2. A composition according to claim 1 wherein the generation of the, or at least one of the, dendrons, in one of said dendrimers is 1.
3. A composition according to claim 1 or 2 wherein the generation of
15 the, or at least one of the, dendrons in one of said dendrimers is one greater than that of the, or at least one of the, dendrons in the other said dendrimer.
4. A composition according to any one of the preceding claims wherein the generation of the, or all the, dendrons in one of said dendrimers is one greater than that of the other of said dendrimers.
- 20 5. A composition according to any of the preceding claims wherein the molar ratio of one said dendrimer to the other dendrimer is from 1:1 to 1:50.
6. A composition according to any one of the preceding claims which comprises dendrimers of three different generations where the dendrimers are comprised of the same core, and dendron type and surface groups.
- 25 7. A composition according to any one of the preceding claims wherein the said dendrimers are light emitting materials.
8. A composition according to any one of the preceding claims wherein dendrimers A and B are the principal species of the mixture that emit light.
9. A composition according to claim 7 or 8 wherein said dendrimers are
30 fluorescent.

10. A composition according to claim 7 or 8 wherein said dendrimers are phosphorescent.

11. A composition according to any one of the preceding claims wherein the at least one dendron which is of different generation in A and B is inherently at least partially conjugated.

12. A composition according to any one of the preceding claims wherein at least one of said dendrimers A and B has one inherently at least partially conjugated dendron.

13. A composition according to any one of claims 1 to 11 wherein at least one of said dendrimers A and B has two inherently at least partially conjugated dendrons.

14. A composition according to any one of claims 1 to 11 wherein at least one of said dendrimers A and B has three inherently at least partially conjugated dendrons.

15. 15. A composition according to any one of claims 1 to 11 wherein all dendrons of said dendrimers A and B are inherently at least partially conjugated dendrons.

16. A composition according to any one of the preceding claims wherein the said dendrimers have the same surface groups.

20 17. A composition according to any one of the preceding claims wherein the said dendrimers are organometallic dendrimers.

18. A composition according to claim 17 wherein the metal cation is part of the core.

25 19. A composition according to claim 17 or 18 wherein at least one of said dendrimers A and B is comprised of more than one at least inherently conjugated dendron and the dendrons thereof are attached to at least two ligands complexed to the metal cation.

20. A composition according to any one of claims 17 to 19 wherein the organometallic dendrimer contains iridium, platinum, or rhenium as part of the core.

30 21. A composition according to any one of the preceding claims in the

form of a solid film.

22. A composition according to claim 21 which is capable of emitting visible light.

23. A composition according to claim 1 substantially as hereinbefore
5 described.

24. An organic light emitting device comprising, in sequence, layers of: an optional substrate, an electrode, a first optional charge-transporting layer, a light emissive layer, a second optional charge-transporting layer and a counter electrode, wherein at least one of the emissive layer, first optional charge-transporting layer and
10 second optional charge-transporting layers is a film as claimed in claim 21 or 22.

25. A device according to claim 24 wherein the emissive layer is a film as claimed in claim 21 or 22.

26. A device according to claim 25 which has at least one charge-transporting layer.

15 27. A device according to any one of claims 24 to 26 wherein the emissive layer also contains an emissive dopant, as additional component.

28. A device according to any one of claims 24 to 27 wherein the emissive layer also contains one or more charge-transporting species, as additional component.

20 29. A device according to any one of claims 24 to 28 wherein the emissive layer also contains a molecular species, as additional component.

30. A device according to any one of claims 24 to 29 wherein the emissive layer also contains a dendritic species, as additional component.

25 31. A device according to any one of claims 24 to 30 wherein the emissive layer also contains a polymer, as additional component.

32. A device according to any one of claims 27 to 31 wherein the additional component comprises 95 to 5 mol% of the total composition.

33. A device according to claim 24 substantially as hereinbefore described.

30 34. A photovoltaic device that comprises at least a composition as

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claimed in any one of claims 1 to 23.